UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION 5
77 WEST JACKSON BOULEVARD
CHICAGO, IL 60604-3590

MAR 2 7 2014

REPLY TO THE ATTENTION OF:

Mr. Andrew Hall
Division of Air Pollution Control
Ohio Environmental Protection Agency
50 West Town Street, Suite 700
P.O. Box 1049
Columbus, Ohio 43216-1049

Dear Mr. Hall:

The U.S. Environmental Protection Agency has reviewed the draft Prevention of Significant Deterioration construction permit (permit number P0115137) for DTE Marietta in Marietta, Ohio. The proposed permit would allow construction of a Combined Heat and Power (CHP) facility to be located at the existing Solvay Polymers USA, LLC (Solvay) chemical complex and would replace Solvay's existing temporary boilers. The CHP system would consist of one 8 megawatt natural gas-fired turbine with a Heat Recovery Steam Generator (HRSG) to produce steam and electricity for the Solvay chemical complex. This permit reflects major levels for greenhouse gases and synthetic minor levels for Nitrogen Oxides (NOx), Carbon Monoxide (CO), and Particulate Matter of 10 microns and smaller (PM_{10}) and Particulate Matter of 2.5 microns and smaller ($PM_{2.5}$). To ensure that the source meets Clean Air Act (CAA) requirements, that the permit will provide necessary information so that the basis of the permit decision is transparent and readily accessible to the public, and that the permit record provides adequate support for the decision, EPA has the following comments:

1. The permit contains synthetic minor limits for the combustion turbine/HRSG (EU P001) and the two backup gas-fired boilers (EU B001 and EU B002) combined for NOx, CO, and $PM_{10}/PM_{2.5}$. For the turbine/HRSG, the permit requires a continuous emissions monitor system/predictive emission monitoring system to monitor the NOx emissions; that gas usage be monitored and used with AP-42 factors to calculate and assure compliance with the CO and $PM_{10}/PM_{2.5}$ synthetic minor limits; and emission testing for CO. For the two backup boilers, the permit requires that gas usage be monitored and used with AP-42 factors to calculate and assure compliance with the NOx, CO and $PM_{10}/PM_{2.5}$ synthetic minor limits, and emission testing for NOx and $PM_{10}/PM_{2.5}$. The turbine CO test results and the boilers' NOx and $PM_{10}/PM_{2.5}$ test results should be used to calculate site-specific emission factors to use instead of AP-42 emission factors to calculate emissions for demonstrating compliance with the synthetic minor limits. Since the permit contains synthetic minor limits for $PM_{10}/PM_{2.5}$ and CO and the synthetic minor limits are very close to the significant thresholds, we also recommend that the permit add $PM_{10}/PM_{2.5}$ testing requirements for the turbine/HRSG as well as CO testing for the two backup boilers. These test results should be used to calculate site-specific emission factors (instead of AP-42 emission factors) to calculate emissions for

demonstrating compliance with the synthetic minor limits. Use of AP-42 emission factors "as source-specific permit limits and/or as emission regulation compliance determinations is not recommended by EPA."[1] In situations where representative source-specific data cannot be obtained, EPA believes that emissions information from similar equipment, is a better source of information for permitting decisions than an AP-42 emission factor. EPA has generally advised that permitting authorities use the following hierarchy when determining the acceptable emissions estimation method for any particular source:

a) Continuous Emissions Monitoring (CEM) data from the stationary source
b) Performance test data from the stationary source
c) Manufacturer's emissions performance guarantee
d) CEM data from a similar stationary source or sources
e) Performance test data from a similar stationary source or sources
f) Industry-derived emission factors
g) AP-42
h) Engineering judgment

Because AP-42 emission factors are not accurate for a specific unit, they should be used as a last resort. This permit should utilize a more accurate estimation method.

2. The permit contains several case-by-case "source design" Best Available Technology (BAT) limits under which DTE Marietta is required to install an emission unit only "designed to meet" certain emission rates. The permit does not require any way to assure compliance with those BAT limits. The permit contains these "source design" BAT limits for: (1) CO for the turbine/HRSG, (2) NOx, $PM_{10}/PM_{2.5}$ and Volatile Organic Compounds (VOC) for the backup boilers, and (3) NOx, CO, $PM_{10}/PM_{2.5}$, and VOC for the Black Start Generator. Such limits are not practically enforceable because they fail to provide for actual emission limits, testing, monitoring, recordkeeping or reporting. For example, page 25 of the draft permit sets forth a "source design" BAT limit requiring the turbine/HRSG to be designed to meet 25 ppm of CO, but the permit does not require any means to assure that the turbine/HRSG is actually operated at or below the 25 ppm emission rate. It is also my understanding that these units have the potential to emit above the NOx significance level and are located at a major source. Without a practically enforceable limit, these units could trigger, or contribute to triggering, additional CAA requirements in the future without realizing it. The permit should be revised to assure that these units have appropriate and practically enforceable BAT limits.

[1] See Introduction to AP 42, Volume I, Fifth Edition - January 1995 (AP-42 Introduction) at 2-3, available at: http://www.epa.gov/ttn/chief/ap42/c00s00.pdf.

We appreciate the opportunity to provide comments on this draft permit. If you have any questions, please feel free to contact me or have your staff contact Rich Angelbeck, of my staff, at (312) 886-9698.

Sincerely,

Genevieve Damico

Genevieve Damico
Chief
Air Permits Section